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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,253	03/07/2002	Kunimasa Shimizu	Q66589	9282

7590 04/17/2008  
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3202

EXAMINER

RANGREJ, SHEETAL

ART UNIT	PAPER NUMBER
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3626

MAIL DATE	DELIVERY MODE
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04/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/092,253

## Applicant(s)

SHIMIZU ET AL.

## Examiner

SHEETAL R. RANGREJ

## Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12, 17-19 and 73-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 17-19, and 73-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Prosecution History Summary***

- Claims 13-16 and 20-72 are cancelled.
- Claims 73-75 are new.
- Claims 1-12, 17-19, and 73-75 are pending.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 17-19, and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al., (U.S. 6,260,021), in view of Marchosky, (U.S. 2002/0029157).
3. As per claim 1, Wong discloses a medical image reading system comprising:  
a plurality of diagnostic clients provided with an image output means which outputs image data to be examined as a visible image, and a diagnosis input means for inputting individual diagnoses obtained on the basis of visible images, (Wong, Abstract, col. 3, lines 30-60; col. 11, lines 29-48) (disclosing processing of various diagnostic images for the purpose of diagnosis by a client/user, such as X-ray, MRI, ultrasound, etc.),

at least one management client provided with a result output means for outputting result of examination obtained on the basis of the individual diagnoses, (Wong, Abstract; Fig. 2; col. 9,

line 34-63; col. 11, lines 29-48; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including the number of diagnostic images and associated results to be transmitted to a management client in the form of an Object Request Broker), and

a server provided with an image storage means and a result storage means which are connected to the diagnostic clients and the management client by way of a network, the image storage means storing image data to be examined and the result storage means storing results of examination obtained on the basis of the individual diagnoses with the results of examination related to the image data, (Wong, Abstract; col. 3, line 60 - col. 4, line 15),

the server causes the result storage means to store results of examination obtained on the basis of the individual diagnoses sent from the respective diagnostic clients, (Wong, Abstract; col. 11, lines 29-48; col. 12, lines 65 - col. 13, line 62), and

the management client receives the result of examination from the server by way of the network and causes the result output means to output the same, (Wong, Abstract; Fig. 2; col. 9, line 34-63; col. 11, lines 29-48; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including the number of diagnostic images and associated results to be transmitted to a management client in the form of an Object Request Broker).

Wong fails to disclose a system wherein each of the diagnostic clients receives a same image data to be examined from the server by way of a network, outputs the same image data to be examined through the image output means and sends individual diagnoses input through the diagnosis input means for the respective images represented by the same image data to be

examined to the server by way of the network. However, such a system component allowing multiple doctors receive the same medical image and then transmit their diagnosis is well known in the art as evidenced by Marchosky, (Marchosky, figs. 4A-E, ¶ 10, 11, 91).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wong and Marchosky in the claimed manner. The motivation would have been to allow health care professionals from different health care providers to easily review the same record and confer with each other as to diagnosis and treatment, (Marchosky, ¶ 11).

4. As per claim 2, Wong discloses a medical image reading system in which said server is further provided with an informing means which, when the server receives a predetermined number of said diagnoses, sends information to the effect that the server has received a predetermined number of said diagnoses to the management client and the management client is provided with an information receiving and output means which receives the information and outputs the same, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would receive and send information including the number of diagnostic images and associated results to be transmitted to a management client in the form of an Object Request Broker).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

5. As per claim 5, Wong discloses a medical image reading system in which client is connected by way of a network to a server provided with an image storage means which stores image data to be examined and a result storage means which stores results of examination obtained on the basis of the individual diagnoses, and comprises a data receiving means which

receives the image data to be examined from the server, (Wong, Abstract Figs. 1, 2; col. 3, line 60 - col. 4, line 15), an image output means which outputs the image data to be examined as a visible image, (Wong, Abstract Figs. 1,2; col. 3, line 60 - col. 4, line 15), a diagnosis input means for inputting individual diagnoses obtained on the basis of visible images, (Wong, Abstract Figs. 1, 2; col. 3, line 60 - col. 4, line 15), and a data sending means which sends the individual diagnoses input through the diagnosis input means to the server, (Wong, Abstract Figs. 1,2; col. 3, line 60 - col. 4, line 15).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

6. As per claim 7, Wong discloses a medical image reading system in which client is connected by way of a network to a server provided with an image storage means which stores image data to be examined and a result storage means which stores results of examination obtained on the basis of the individual diagnoses, and comprises a data receiving means which receives results of examination from the server, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including diagnostic images and associated results for transmission to a management client in the form of an Object Request Broker), and a result output means which outputs the results of examination received by the data receiving means, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

7. As per claim 8, Wong discloses a system in which said data receiving means is further provided with an information output means which receives information to the effect that the server has received a predetermined number of said diagnoses from the server and outputs the same, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including the number of diagnostic images and associated results).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

8. As per claim 9, Wong discloses a server for a medical image reading system in which server is connected by way of a network to a plurality of diagnostic client and at least one management client and comprises an image storage means which stores image data to be examined, (Wong, Abstract Figs. 1, 2; col. 9, line 34 - col. 10, line 27), a data sending means which sends the image data stored in the image storage means to the diagnostic clients, (Wong, Abstract Figs. 1,2; col. 9, line 34 - col. 10, line 27), a data receiving means which receives from the diagnostic clients individual diagnoses obtained on the basis of the image data to be examined, (Wong, Abstract Figs. 1, 2; col. 9, line 34 - col. 10, line 27), and a result storage means which stores results of examination obtained on the basis of the individual diagnoses with the results of examination related to the image data to be examined, (Wong, Abstract Figs. 1, 2; col. 9, line 34 - col. 10, line 27), wherein said data sending means is further provided with a function of sending to the management clients the results of examination stored in the result storage means, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including

diagnostic images and associated results for transmission to a management client in the form of an Object Request Broker).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

9. As per claim 10, Wong discloses a server in which said data sending means is further provided an information sending means which sends to the management client information to the effect that the server has received a predetermined number of said diagnoses, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including the number of diagnostic images and associated results for transmission to a management client in the form of an Object Request Broker).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

10. As per claim 17, Wong discloses a medical image reading method comprising the steps of  
storing image data to be examined in a server which is provided at a place remote from a plurality of diagnostic clients and connected to the diagnostic clients by way of a network, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62), inputting individual diagnoses obtained on the basis of the output visible image through the diagnostic clients, (Wong, Abstract, col. 3, lines 30-60; col. 11, lines 29-48) (disclosing processing of various diagnostic images for the purpose of diagnosis by a client/user, such as X-ray, MRI, ultrasound, etc.), sending the individual diagnoses to the server, storing in the server results of examination obtained on the



basis of the individual diagnoses sent thereto with the results of examination related to the pieces of image data, (Wong, Fig. 2; col. 9, line 34- 63), and causing a management client to receive the result of examination for a desired piece of image data stored in the server and to output the same, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including diagnostic images and associated results for transmission to a management client in the form of an Object Request Broker).

Wong fails to disclose the following method step of causing each of the diagnostic clients to receive a same piece of image data out of the image data stored in the server and to output the same piece of image data as a visible image, (Wong, Abstract Figs. 1, 2; col. 9, line 34 - col. 10, line 27).

However, such a method step allowing multiple doctors receive the same medical image and then transmit their diagnosis is well known in the art as evidenced by Marchosky, (Marchosky, figs. 4A-E, ¶ 10, 11,91).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

11. As per claim 18, Wong discloses a medical image reading method further comprising the step of causing the server, when the server receives all the diagnoses, to send information to the effect that the server has received all of said diagnoses to the management client, (Wong, Fig. 2; col. 9, line 34-63; col. 13, lines 26-62) (disclosing well-known client/server architecture and object-oriented formats that would send information including the number of diagnostic images

and associated results for transmission to a management client in the form of an Object Request Broker).

The motivation to combine Wong and Marchosky is as provided in the rejection of claim 1 and incorporated herein by reference.

12. As per claim 3, Wong fails to disclose a medical image reading system in which said server further comprises an automatic determination means which automatically makes examination for a given piece of image data on the basis of all or part of the individual diagnoses received and outputs result of examination. However, such a system is well-known in the art as evidenced by Marchosky, (Marchosky: Abstract, Fig. 2B, 2C, 4D: ¶ 79-82) (disclosing an automatic determination means for examining image data).

It would have been obvious to one of ordinary skill in the art to combine Wong and Marchosky, The motivation would have been to allow weighted diagnostic program information, including imaging, to be incorporated in to a computerized medical record database, (Marchosky, Abstract; Fig. 4D).

13. As per claim 4, Wong fails to disclose a medical image reading system in which, each of the diagnostic clients is provided with a function of sending data on the doctor in charge together with the relevant individual diagnosis to the server so that the automatic determination means obtains weight information for the doctor in charge, the weight information stored in the server, and makes examination weighting the individual diagnoses according to the doctor in charge. However, such a system is well-known in the art as evidenced by Marchosky, (Marchosky, Abstract, Fig. 3: ¶ 75-78, 91) (disclosing weighting diagnostic information and storing information related to the doctor in charge).

It would be obvious to one of ordinary skill in the art to modify Marchosky in order to weight variables according to the doctor in charge. The motivation would have been to eliminate any bias in the results, (Marchosky, ¶ 94).

14. As per claim 6, Wong fails to disclose a diagnostic client in which said data sending means sends data on the doctor in charge together with the relevant individual diagnosis to the server. However, such a diagnostic client is well-known in the art as evidenced by Marchosky, (Marchosky, ¶ 91).

15. As per claim 11, Wong fails to disclose a server in which said data sending means is further provided with an automatic determination means which automatically makes examination for a given piece of image data on the basis of all or part of the individual diagnoses received and outputs result of examination. However, such a server is well-known in the art as evidenced by Marchosky, (Marchosky, Abstract, Fig. 2B, 2C, 4D: ¶ 79-82) (disclosing an automatic determination means for examining image data).

16. As per claim 12, Wong fails to disclose a server in which said data receiving means receives data on the doctor in charge together with the relevant individual diagnosis from the diagnostic client, and the automatic determination means makes examination weighting the individual diagnoses according to the doctor in charge. However, such a server is well-known in the art as evidenced by Marchosky, (Marchosky, Abstract, Fig. 3: ¶ 75-78, 91) (disclosing weighting diagnostic information and storing information related to the doctor in charge).

It would be obvious to one of ordinary skill in the art to modify Marchosky in order to weight variables according to the doctor in charge. The motivation would have been to eliminate any bias in the results, (Marchosky, ¶ 94).

17. As per claim 19, Wong fails to disclose a medical image reading method as in which the result of examination is weighted by individual diagnoses. However, such a method is well-known in the art as evidenced by Marchosky, (Marchosky, Abstract, Fig. 3: ¶ 75-78, 91) (disclosing weighting diagnostic information).

It would be obvious to one of ordinary skill in the art to modify Marchosky in order to weight variables as claimed. The motivation would have been to eliminate any bias in the results, (Marchosky, ¶ 94).

18. As per claim 73, Wong fails to teach the medical image reading system wherein the result of examination is a composite diagnosis based on each diagnosis of the individual diagnoses. However, such a system is well-known in the art as evidenced by Marchosky, (Marchosky: ¶ 61-65).

It would have been obvious to one of ordinary skill in the art to modify Marchosky in order to comprise a composite diagnosis as claimed. The motivation would have been to create a more centralized system for the patient (Marchosky: ¶ 20).

19. Claim 74 recite substantially similar limitations as those already addressed in claim 73, and, as such, are rejected for similar reasons as given above.

20. As per claim 75, Wong fails to disclose a medical image reading system wherein the server further comprises a composite diagnosis generating means for generating a composite diagnosis based on the result of examination obtained on the basis of the individual diagnoses. However, such a system is well-known in the art as evidenced by Marchosky, (Marchosky: ¶ 75-83).

It would have been obvious to one of ordinary skill in the art to modify Marchosky in order to comprise a composite diagnosis as claimed. The motivation would have been to create a more centralized system for the patient (Marchosky: ¶ 20).

***Response to Arguments***

21. Applicant's arguments filed December 27, 2007 have been fully considered but they are not persuasive for the following reasons:

22. Applicant argues that Wong fails to disclose "a result output means for outputting the result of examination obtained on the basis of the individual diagnoses." Examiner disagrees. Wong's system discloses interfaces to report results from lab instruments as noted above. Wong further includes an Object Request Broker, which enables a user to request and receive responses; creating an interface to input relation of the image and the patient information as noted above.

23. Applicant argues that Wong fails to disclose "the server receives a predetermined number of said diagnoses, sends information to the effect that the server has received a predetermined number of said diagnoses to the management client and the management client is provided with an information receiving and output means which receives the information and outputs the same." Examiner disagrees. The feature is disclosed as noted above in the sense that Wong discloses a well-known client/server architecture and object-oriented formats that would send information including diagnostic images and associated results.

24. Applicant argues that the information used in the automatic determination is different between Marchosky's diagnostic program and the invention. Examiner states that based on the broadest interpreted meaning of the claim limitation, the limitations are disclosed as noted above.

***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Robb, R. A., Barillot, C. Interactive display and analysis of 3-D medical images. IEEE Transactions on Medical Imaging. Volume 8, Number 3. September 1989.

-Wood et al. (U.S. Patent No. 5,715,823) discloses a medical ultrasonic diagnostic imaging system.

-Groezinger (U.S. Patent No. 6,101,407) discloses a method and system for remotely viewing and configuring from a medical imager.

-Pinsky et al. (U.S. Patent No. 5,655,084) discloses a Radiology Healthcare Network providing high quality, timely medical interpretations of radiological images.

-Slomka, Piotr J., et al. Java-based remote viewing and processing of nuclear medicine images: toward "the imaging department without walls." The Journal of Nuclear Medicine. Volume 41, Number 1, pp. 111-118. January 2000.

-Weidong, Cai. Web-based digital medical images. IEEE Computer Graphics and Applications. Volume 21, Issue 1, pp. 44-47. January/February 2001.

-Wong, S.T.C., Huang, H.K. Networked multimedia for medical imaging. IEEE Multimedia. Volume 4, Issue 2, pp. 24-35. April-June 1997.

-Canfield, II et al. (U.S. Patent No. 5,897,498) discloses a diagnostic imaging system that is capable of sending and receiving electronic messages from the user interface.

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEETAL R. RANGREJ whose telephone number is (571)270-1368. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Gilligan can be reached on 571-272-6770. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SRR

/Robert Morgan/  
Primary Examiner, Art Unit 3626